

REMARKS

Claims 1-8 are all the claims pending in the application, new claim 8 having been added as indicated herein. Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fukuzuka et al. (U.S. Patent No. 3,820,368), hereinafter referred to as Fukuzuka. Claims 2, 5, and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukuzuka in view of Dumontel. Finally, claims 1 and 3-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuhnert (U.S. Patent No. 3,838,495) in view of Pearson.

As a preliminary matter, Applicant respectfully requests that the PTO send a Notice of Recordation of Assignment with respect to the Assignment submitted on May 30, 2001.

§ 112, second paragraph, Rejections - Claims 1-7

Claims 1-7 are rejected under 35 U.S.C. § 112 for the reasons set forth on page 2 of the Office Action. In response, Applicant amends independent claim 1 and dependent claims 2, 4, 5, and 6, as indicated herein, and submits that these amendments obviate the § 112, second paragraph, rejections to claims 1-6. Claim 7 is canceled, as indicated herein.

§ 102 Rejections (Fukuzuka) - Claims 1 and 7

With respect to the rejection of claims 1 and 7, the Examiner states,

The Fukuzuka et al. plated stamping stock has an intermediate alloyed layer, as required by these claims. Trimming excess material, as recited in Claim 1, is conventionally performed

subsequent to shaping sheet material in dies, and may be assumed to be present in Fukuzuka et al. *See Office Action, page 3.*

In response to the Examiner's rejection of claim 1, Applicant submits the following explanation of the present claimed invention.

The invention consists, for example, in cutting blanks of a steel having very high mechanical properties, and which have previously been coated with a metal or a metal alloy and cooled to solidify the coating. These blanks can then be stamped. Before or after the stamping, these blanks can be subjected to a thermal treatment in order to turn the entire coating into an alloyed compound. This alloyed compound can derive from the interface between the sheet and the coating, by diffusion of iron into this coating. If one does not complete the thermal treatment, the coated sheet comprises three layers: the steel, the intermetallic alloy and a layer of the pure initial coating, as shown in Fukuzuka, for example.

On the other hand, in the present invention, for example, there are only two layers of the produced steel sheet: the steel and the alloyed compound, because the entire coating is transformed. This compound is therefore, at the surface of the sheet, and that is why it can act as a lubricant, when required. Further, the compound can be generated on the surface from the initial solidified coating. *See page 4, lines 6-8 of the specification.*

Applicant amends claim 1, as indicated herein, for clarification purposes and submits that, at least based on the foregoing, Fukuzuka does not teach or suggest at least, "generating an alloyed compound on a surface of the strip of rolled steel sheet, before the stamping, said alloyed compound ensuring protection against corrosion and steel decarburization, and providing a

lubrication function.” That is, as indicated above, nowhere does Fukuzuka even mention the “generation” of an alloyed compound on a surface of the strip of rolled steel sheet.

Moreover, Fukuzuka only describes a simple hot dip aluminum coating, which produces a sheet covered by an intermetallic alloy, the alloy being covered by a layer of the pure initial coating, namely aluminum or silicon and aluminum, depending of the composition of the bath. On the other hand, the process of claim 1 produces a steel sheet covered by a layer of an alloyed compound, without a layer of pure initial coating (see page 6, lines 16-18, and page 4, lines 6-8). In Fukuzuka, there is only one step, which does not include the generation of the claimed alloyed compound. In fact, such an alloyed compound is not desired in Fukuzuka (see Fukuzuka, col. 2 lines 34 to 42).

Further, with respect to claim 1, Applicant submits that Fukuzuka does not teach or suggest at least “said alloyed compound ensuring protection against corrosion and steel decarburization, and providing a lubrication function,” as recited in amended independent claim 1. Fukuzuka only discloses applying a coating on sheet metal structures for the purpose of preventing corrosion, but does not mention that the coating has lubrication qualities.

§ 103 Rejections (Fukuzuka / Dumontel) - Claims 2, 5, and 6

With respect to dependent claims 2, 5, and 6, the Examiner rejects these claims over Fukuzuka in view of Dumontel. Applicant submits that dependent claims 2, 5, and 6 are patentable at least for the same reasons set forth above for allowing independent claim 1, from which claims 2, 5, and 6 depend. Dumontel does not make up for the deficiencies of Fukuzuka.

Further, with respect to Dumontel, Applicant submits that Dumontel does not teach or suggest at least an “alloyed compoundproviding a lubrication function,” as recited in claim 1. Dumontel only mentions on page 3, first column (4th full paragraph) that the piece must receive some lubricant, like graphite or heat-resistant greases, before being formed, and therefore obviously there is no alloyed compound for providing a lubrication function. Therefore, for at least this reason, Applicant submits that claims 2, 5, and 6 are patentable at least by virtue of their dependencies from independent claim 1.

Further, with respect to claim 6, the Examiner states that quenching is considered to be an obvious expedient to one skilled in the art depending merely on the hardness characteristics desired in the product. *See Office Action, page 3.* In response, Applicant submits that even if, *assuming arguendo*, quenching is obvious to one skilled in the art based on hardness characteristics of a particular product, the Examiner has not shown that the applied references teach or suggest that the claimed part is cooled “so that it is quenched at a rate higher than a critical quenching rate,” as recited in amended claim 6.¹ Applicant submits that claim 6 is patentable at least because the above-quoted limitation is not satisfied by the applied references.

§ 103 Rejections (Kuhnert / Pearson) - Claims 1 and 3-5

Claims 1 and 3-5 are rejected for the reasons set forth on page 4 of the Office Action.

In response to the rejections, with respect to claim 1, Applicant submits that this claim is patentable over the applied references at least for similar reasons set forth above with respect to

¹ Claim 6 is amended, as indicated herein.

the § 102 rejections. That is, the applied references only disclose applying a coating on sheet metal structures for the purpose of preventing corrosion, but do not mention that the coatings have lubrication qualities.

Further, Applicant submits that neither Kuhnert nor Pearson, either alone or in combination, teaches or suggests at least “generating an alloyed compound on a surface of the strip of rolled steel sheet, before the stamping, said alloyed compound ensuring protection against corrosion and steel decarburization, and providing a lubrication function,” as recited in claim 1. Kuhnert only describes cold-shaping a zinc-plated sheet material. No thermal treatment occurs after the cold-forming, thus no alloyed compound can be generated, as is described in independent claim 1. Pearson does not make up for the deficiencies of Kuhnert.

Applicant submits that dependent claims 3-5 are patentable at least by virtue of their dependencies from claim 1.

Further, with respect to dependent claim 5, neither of the applied references, either alone or in combination, teaches or suggests at least “wherein the coated steel sheet is subjected to a rise in temperature in excess of 700°C prior to at least one of a stamping and heat treatment,” as recited in amended claim 5. That is, Pearson, for example, only discloses coating steel strips by spraying heated zinc on a steel strip, but does not disclose subjecting a coated steel sheet to a rise in temperature in excess of 700°C wherein the coated steel sheet is subjected to a rise in temperature in excess of 700°C prior to at least one of a stamping and heat treatment. Kuhnert does not make up for Pearson in this regard.

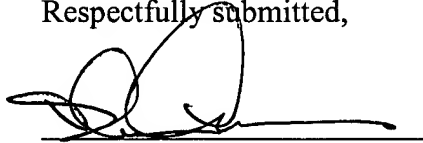
Amendment Under 37 C.F.R. § 1.111
U.S. Appln. No. 09/827,167

Finally, Applicant adds new claim 8, as indicated herein, to round out the scope of protection solicited for the present invention. Applicant submits that new claim 8 is patentable at least by virtue of its dependency from claim 5.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Richard C. Turner', is written over a horizontal line.

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